

GERMINATION OF SPORES OF *ISOETES TUCKERMANI* A. BR. IN THEIR NATURAL HABITAT.—Collecting pond plants in Worcester County, Massachusetts, was unusually successful last season, because it was possible to walk over most of an entire pond-bottom and up the bed of the entering stream. Mrs. Gates and I found *Isoetes* at various spots. The plants were much matured with the spores mostly discharged and about the color of the exsiccated muck. In the plant society, among many species, the following were abundant: *Eleocharis Smallii* Britton, mats of *Eleocharis acicularis* (L.) R. & S., *Scirpus Smithii* Gray, forma *setosus* Fernald, *Xyris caroliniana* Walt., *Juncus militaris* Bigl. in relatively deeper depressions, and *Eriocaulon septangulare* With. scattered in shallower areas.

A patch of vivid green on the margin of the dried-out mill pond, marked a stranded concentration of *Isoetes*, green with the first few leaves of a multitude of germinating spores. This green patch covered irregularly some fifteen to twenty square feet, at the southern end of the pond, near, but at one side of the outlet. When flooded to normal highwater, the gentle slope would be roughly a foot below the surface, at the deepest point. A collection of the *Isoetes* was made with the sandy soil of the pond bottom adhering to the mature and fruiting plants. Microscopical examination at the laboratory confirmed the germination and the development of sporelings in all stages, the cracking open of the spores, spores with emerging leaves and rooted plantlets with several leaves, the spore-coat in some instances remaining attached. Myriads of spores speckled the soil.

The species was determined by Mr. Philip G. Meissner as *Isoetes Tuckermani* A. Br. (Hadwen Herbarium sheet 28,524). Dr. Norma E. Pfeiffer of Boyce Thompson Institute has kindly verified the determination (27 April 1954), which is much appreciated. The collection was made 27 September 1953 in Douglas, Massachusetts, at an abandoned mill pond, on the west side of South Street, approximately at the boundary of Burrillville, Rhode Island. The pond was again visited 15 June 1954. It was found at capacity level and the spot where the *Isoetes* had been collected was completely covered. The species could not be found even though a careful search was made.

The apparent absence of *Isoetes* this year may be attributable to the earliness of the season.—BURTON N. GATES,

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SOME NOTES ON THE FLORA OF SOUTHERN ILLINOIS.—While botanizing in southern Illinois during 1953 and the early part of 1954, several plants of unusual occurrence for the area were found. Some of these mark additions to the flora of Illinois while the remainder either are range extensions or new station records.

Unless otherwise stated, all specimens cited are on deposit in the herbarium of Southern Illinois University, Carbondale, Illinois.

*ASPLENIUM BRADLEYI* Eaton. This rare fern was found growing in crevices in a sandstone bluff. A frond from a large plant was found to have eighteen pairs of pinnae. COLLECTION DATA: crevice of sandstone bluff, along Piney Creek, one mile west of West Point, Randolph County; May 22, 1954. *Mohlenbrock and Voigt 2491*.

*CAREX AQUATILIS* Wahlenb. This species was found in a clump along a stream in Randolph County. COLLECTION DATA: along Piney Creek, one mile west of West Point, Illinois; April 24, 1954. *Mohlenbrock 2290*.

*CAREX TORTA* Boott. This recently discovered plant for Illinois has been recorded from several stations. COLLECTION DATA: clumped in a flowing stream, Dixon Springs State Park, Pope County; April 16, 1954. *Mohlenbrock 2057*. Along Rock Creek, four and one-half miles north of Cave-in-Rock, Hardin County; April 17, 1954. *Voigt and Mohlenbrock 2146*. Emerged in Piney Creek, one mile west of West Point, Randolph County; April 24, 1954. *Mohlenbrock 2322*.

*JUNCUS DIFFUSISSIMUS* Buckl. The diffuse rush, found in the adjacent states of Indiana and Missouri, was collected for the first time in Illinois along a roadside ditch. COLLECTION DATA: wet soil along country road, one-half mile south of Makanda, Giant City State Park, Jackson County; September 19, 1953. *Voigt and Mohlenbrock 1507*.

*TRILLIUM RECURVATUM* Beck, forma *SHAYI* Palmer & Steyerm. This yellow color-form is found at several sites in a rich mesic woodland at Lake Murphysboro. COLLECTION DATA: rich, mesic woods, Lake Murphysboro, Jackson County; April 23, 1954. *Mohlenbrock 2207*.

*RANUNCULUS HARVEYI* (Gray) Britt. This species was known previously from southern Missouri, Arkansas, and Alabama. COLLECTION DATA: dry rocky slopes along Piney Creek, one mile west of West Point, Illinois, Randolph County; April 24, 1954. *Mohlenbrock 2316*.